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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,606	10/19/2001	Kevin R. Keegan	89190.072901/DP-304631	8160

7590 10/31/2003  
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EXAMINER  
ALEJANDRO, RAYMOND

ART UNIT 1745  
PAPER NUMBER

DATE MAILED: 10/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n N .

10/032,606

Applicant(s)

KEEGAN ET AL.

Examiner

Raymond Alejandro

Art Unit

1745

-- The MAILING DATE of this c mmunication appears n the c ver sheet with the c rresp ndence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) 3-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Election/Restrictions***

1. Applicant's election of Group I and Species 1 (Claims 1-2) in Paper No. 3 and 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Drawings***

2. The sheets of drawings filed on 10/19/01 have been accepted.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. The language "non-uniform over the areal extent of the cell" in claim 1 is of uncertain, thereby rendering the scope of the claims indefinite. Further, the foregoing language is not defined by the claim, and the specification does not provide a standard for ascertaining the requisite degree. It is uncertain whether the language "non-uniform over the areal extent of the cell" refers to: the entire fuel cell per se, or to a particular extent of surface of the fuel cell, or simply to a part of any fuel cell component. Further clarification is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-2 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mieney et al 2002/0098400.

The present application is directed to a fuel cell wherein the disclosed inventive concept comprises the specific hydrogen pressure regulating feature. Other limitations include the fuel cell components.

With respect to claims 1-2:

Mieney et al teach a fuel cell comprising a fuel cell unit including a cathode; an anode and an electrolyte disposed between the cathode and the anode (CLAIM 2). The fuel cell is a solid oxide fuel cell (SECTION 0040). It is also disclosed that the fuel cell unit includes an inlet and an outlet coupled to the fuel cell unit; a reducing gas supply supplying gas for actuating the actuator and for regulating gas to the fuel cell unit (CLAIM 1).

Mieney et al further describe disposing an electrochemical cell having the anode, the cathode and the electrolyte, disposing control valves having first opening with a reducing gas supply having variable pressure and a second opening in fluid communication therewith; disposing a flow of oxidant to the cathode (SECTION 0040); disposing the reducing gas in fluid communication with the anode; actuating an actuator in the control valve with the variable gas supply pressure, and regulating the flow of reducing gas to the electrochemical cell by varying the gas supply pressure and controlling the flow of the reducing gas being pumped to the anode for preventing anode oxidation; the reducing gas comprises hydrogen (SECTION 0040).  
*Therefore, the pressure of hydrogen is being regulated to control the power generated through electrochemical conversion by the fuel cell.*

As to the limitation that "resistance to the flow of electric current through the cell is non-uniform over the areal extent of the cell" or "the electrical resistance is areally non-uniform over one of said anode, cathode or electrolyte", it is contended that the electrical resistance of any

body is intrinsically related to the chemical nature of its construction material, therefore, since the construction material of each of the fuel cell components i.e. the anode, the cathode, the electrolyte, the separator; the end plate and the likes differs from one another, any fuel cell will exhibit non-uniform resistance to the flow of electric current through the cell over the areal extent thereof or over the anode, the cathode or the electrolyte. *Accordingly, each fuel cell component presents a varied appearance of electrical resistance pattern due to its material composition.* Thus, it is asserted that having shown that the construction material of each particular fuel cell component is chemically different from each other, the above-mentioned characteristic, property and/or function is hence inherent as the construction material of fuel cell components (*i.e. the solid oxide electrolyte*) recited in the reference is substantially identical to that of the claims, and therefore, claimed properties, characteristics or functions are presumed to be inherent (**MPEP 2112. Requirements of Rejection Based on Inherency**). Thus, the prior art fuel cell seems to be identical except that the prior art is silent as to an inherent function, property and/or characteristic. In that, it is noted that the extrinsic evidence makes clear that the missing descriptive matter is necessarily present in fuel cell described in the reference, and that it would be so recognized by persons of ordinary skill.

Therefore, the claims are anticipated by Mieney et al. However, if the claims are not anticipated the claims are obvious as it has been held similar products claimed in terms of its function, property and/or characteristic are obvious. *In re Best 195 USPQ 430 and In re Fitzgerald 205 USPQ 594. See rationale and/or technical reason above to reasonably support the determination that the inherent function, property and/or characteristic necessarily flows from the teaching of the applied prior art.*

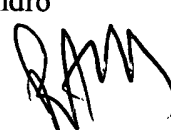
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (703) 306-3326. The examiner can normally be reached on Monday-Thursday (8:30 am - 7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Raymond Alejandro  
Examiner  
Art Unit 1745

A handwritten signature in black ink, appearing to read 'RAM', is written over a long, sweeping horizontal line.